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BATS FROM ISLANDS
IN THE GULF OF CALIFORNIA

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The Gulf of California is rich in islands, a number of which are inhabited by land mammals. Fifteen species and 39 subspecies of insular terrestrial mammals are currently recognized as occurring here. Records for aerial mammals from these islands, nevertheless, are exceedingly few, except for *Pizonyx vivesi*.

Through the generosity of the Belvedere Scientific Fund of San Francisco, Mr. Roy E. Marquardt of Van Nuys, California, and Mr. Richard Adcock of LaPaz, Baja California, Mexico, the authors along with nine other scientists had an opportunity from June 20 to July 1, 1964, to visit a number of islands situated in the Gulf of California between Loreto and LaPaz. Mr. Adcock provided his boat, the *Marisla*, for transportation. Several new insular records for bats were secured on this trip, which induced us to summarize briefly the information available to date on the distribution of members of the order Chiro-

tera on islands in the Gulf. Permission to collect scientific specimens was granted by Dr. Rodolfo Hernandez Corzo, Dirección General de la Fauna Silvestre, Mexico City.

FISH-EATING BAT (*Pizonyx vivesi*). This is one of the most distinctive endemic species of the Baja California region (see Orr, 1960). The type locality given by Menegaux (1901) is "Ilot du Cardonal au Islo, parti de l'Archipel Salsi pudes." This locality is considered to be Isla Partida which is just southeast of Isla Angel de la Guarda. Reeder and Norris (1954) summarized the known localities from which this species had been recorded up to the year 1951. Included were records of specimens from eight islands as follows: Isla Partida, Isla Tiburon, Isla Pescadora, Isla San Jorge, Isla Pond, Isla Encantada, Isla Granito, Isla Patos, in addition to those from localities along the coast of Sonora and both the gulf and Pacific coasts of Baja California. They also included a sight record from Isla San Pedro Nolasco. All localities listed are north of 27° 30' N. Lindsay (1962, p. 32) later recorded this species from Isla Cayo which is just west of the southern tip of Isla San José at approximately 24° 53' N. (for further details see Banks, 1946b).

When the writers visited Isla Cayo on June 28, 1964, bats of this species were located in three separate crevices on this islet. Five individuals were collected by members of the expedition. One of these, a slightly more than half-grown male probably not much more than one month in age, is now in the collection of the California Academy of Sciences. Three are in the San Diego Natural History Museum, and one has been selected for deposit with the Dirección General de la Fauna Silvestre in Mexico City. On June 29 and again on June 30, 1964, one of us (Orr) found a colony of these bats still farther south on Los Islotes, a group of rocks at about 24° 37' N., one-half mile north of Isla Partida (not to be confused with Isla Partida, the type locality for *Pizonyx vivesi*, at 28° 54' N.). They were located by their characteristic vocal utterances as well as the presence of reddish droppings beneath their daytime retreat. The crevice in which they were situated, however, was inaccessible. We were later informed by Dr. and Mrs. T. Eric Reynolds of Piedmont, California, that they had observed *Pizonyx vivesi* on Cerralvo Island in the spring of 1964.

WESTERN PIPISTRELLE (*Pipistrellus hesperus australis*). Townsend (1912, p. 127) recorded a female of this species taken on Cerralvo [Cerralvo] Island on April 19, 1911, although this was apparently overlooked by Hatfield (1936) in his revision of the species. Several additional specimens were collected on this island from 1960 to 1962 (see Banks, 1964c). The species was also reported from Monserrate Island by Banks (1964a) on the basis of two specimens collected on May 10, 1963.

On April 20, 1962, a female was obtained on Isla Espíritu Santo by Chris Parrish (Lindsay, 1962, p. 37). The specimen, of which the skull was lost, is in San Diego Natural History Museum. The species had not previously been reported from this island.

On the evening of June 25, 1964, we collected four individuals of this species between sundown and dark at the south end of Isla Catalina. An adult male and an adult female were saved as study skins and are now in the collection of the California Academy of Sciences. The other two, one of which was a male, were so badly shot that they were discarded. This is the first record of this species for this island.

On the evening of June 26, 1964, two adult females were secured at Arroyo Aguada on the northeast side of Isla San José and on the following evening three more females were secured on the shore of Amortajada Bay at the south end of this island. These are the first specimens of *Pipistrellus hesperus* to be recorded from Isla San José. Four of these (three study skins and one skull only) are in the collection of the California Academy of Sciences and one is in the collection of the San Diego Natural History Museum.

All of the insular specimens of *Pipistrellus hesperis* examined from Isla Monserrate, Isla Santa Catalina, Isla San José, Isla Espíritu Santo and Isla Cerralvo appear referable to the race *australis*.

BIG BROWN BAT (*Eptesicus fuscus penninsulae*). As noted by Banks (1964b), a female of this species was secured on Cerralvo Island on May 27, 1962. On the evening of June 27, 1964, one of us (Orr) secured another female at Amortajada Bay on the south end of San Jose Island. As far as known these are the only records for this species from islands in the Gulf of California. Both specimens (now in the collection of the California Academy of Sciences) are small in size and dark in color. As noted by Engles (1936, p. 658), the progressive decrease in size in *Eptesicus fuscus* and the tendency toward rich coloration down through the peninsula "provides a means of recognizing the race *penninsulae*."

TOWNSEND'S BIG-EARED BAT (*Plecotus townsendii pallescens*). A single specimen of this bat (now in the San Diego Natural History Museum) was secured by Banks on Santa Catalina Island on the evening of June 24, 1964. This is the first record for this species from an island in the Gulf of California as well as the most southern record for the Baja California region published to date. It is tentatively assigned to the race *pallescens*.

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